

CLAIMS:

1. A waste and recyclable materials compaction and handling apparatus including:

a storage container for said materials;

5 an elongated charging hopper defined adjacent to and alongside said storage container for receiving the materials, said charging hopper having open end portions defining pathways leading into the interior of said storage container;

a packing head mounted for travel within and along said charging hopper between said open end portions.

10 at least one driver connected to said packing head to effect the travel thereof along said charging hopper between positions adjacent said open end portions; and

15 said packing head having opposed packing faces adapted to engage the materials placed in said charging hopper such that as said packing head is driven along said charging hopper, said materials are compacted and forced along the charging hopper and, depending on the direction of travel of said packing head, through one or the other of said pathways defined by said charging hopper open end portions and thence into the interior of the storage container.

2. The apparatus of claim 1 wherein said packing head is mounted for travel along an elongated support assembly extending lengthwise of said charging hopper.

20 3. The apparatus of claim 2 wherein said at least one driver comprises at least one hydraulic packing cylinder extending lengthwise of said charging hopper.

4. The apparatus of claim 3 wherein said support assembly and said at least one hydraulic cylinder extend along a side portion of said charging hopper, said charging hopper being located along a lower portion of said storage container.

25 5. The apparatus of claim 4 wherein a pair of said hydraulic packing cylinders is provided, each being adapted for moving the packing head in a respective one of rearward and forward directions of travel.

6. The apparatus of any one of claims 1 - 5 wherein said storage container includes wall portions contoured to assist in movement of the materials being compressed by said packing head through said open end portions and into and within the interior of the storage container.

5 7. The apparatus of claim 6 wherein said wall portions comprise a frontal contoured end section and a rear contoured end section of said storage container both shaped to facilitate said movement of the materials into and within said storage container.

10 8. The apparatus of claim 7 wherein said rear end section is hinged to provide a tailgate which can be opened to permit the contents of the storage container to be dumped.

9. The apparatus of claim 8 including pivotal connections for securing the compaction and handling apparatus to the chassis of a transport vehicle, and mechanisms for opening and closing said tailgate in the course of a dumping procedure.

15 10. The apparatus of claim 8 including a clean out panel mounted for pivotal movement within the storage container adjacent said frontal end section, and an actuator for pivoting said clean out panel to dislodge materials adjacent said frontal end section.

20 11. The apparatus of any one of claims 1 - 10 including a loading hopper mounted adjacent to and alongside said charging hopper for movement from a first lowered position to permit ready filling of the loading hopper to a second raised position above the charging hopper for dumping of materials into the charging hopper.

12. The apparatus of claim 11 wherein said loading hopper has a retractable side wall which moves to enlarge the capacity of the loading hopper during filling and which partly closes during movement to the second raised position.

13. 10 The apparatus of claim 8 including a clean out panel mounted for pivotal movement within the storage container adjacent said frontal end section, and an actuator for pivoting said clean out panel to dislodge materials adjacent said frontal end section.

5 11. The apparatus of claim 6 wherein said packing head is mounted for travel along an elongated support assembly extending lengthwise of said charging hopper.

12. 15 The apparatus of claim 11 wherein said at least one driver comprises at least one hydraulic packing cylinder extending lengthwise of said charging hopper.

10 16. 13. The apparatus of claim 12 wherein said support assembly and said at least one hydraulic cylinder extend along a side portion of said charging hopper, said charging hopper being located along a lower portion of said storage container.

17. 14. The apparatus of claim 13 wherein a pair of said hydraulic packing cylinders is provided, each being adapted for moving the packing head in a respective one of rearward and forward directions of travel.

15 18. 15. A waste and recyclable materials compaction and handling apparatus including:

a storage container for said materials;

an elongated charging hopper defined adjacent to and alongside said storage container for receiving the materials, said charging hopper having open end portions defining pathways leading into the interior of said storage container;

20 a packing head mounted for travel within and along said charging hopper between said open end portions;

at least one driver connected to said packing head to effect the travel thereof along said charging hopper between positions adjacent said open end portions;

25 said packing head having opposed packing faces adapted to engage the materials placed in said charging hopper such that as said packing head is driven along said charging hopper, said materials are compacted and forced along the charging hopper and, depending on the direction of travel of said packing head, through one or the other of said pathways defined

by said charging hopper open end portions and thence into the interior of the storage container; and

5 a loading hopper mounted adjacent to and alongside said charging hopper for movement from a first lowered position to permit ready filling of the loading hopper to a second raised position above the charging hopper for dumping of materials into the charging hopper.

16 The apparatus of claim 15 wherein said loading hopper has a retractable side wall which moves to enlarge the capacity of the loading hopper during filling and which partly closes during movement to the second raised position.

10 17. The apparatus of claim 15 wherein said packing head is mounted for travel along an elongated support assembly extending lengthwise of said charging hopper.

18. The apparatus of claim 17 wherein said at least one driver comprises at least one hydraulic packing cylinder extending lengthwise of said charging hopper.

15 19. The apparatus of claim 18 wherein said support assembly and said at least one hydraulic cylinder extend along a side portion of said charging hopper, said charging hopper being located along a lower portion of said storage container.

20. The apparatus of claim 19 wherein a pair of said hydraulic packing cylinders is provided, each being adapted for moving the packing head in a respective one of rearward and forward directions of travel.